PROPERTY PLANNING COMMON ELEMENTS

COMPONENTS OF MASTER PLANS

HABITATS AND THEIR MANAGEMENT

Forested Seep

Description

Forested seeps are shaded seepage areas with active spring discharges that may host a number of uncommon to rare species. They are most often found in hardwood forests, although conifers may be present in northern Wisconsin or as relicts in the south. Forested seeps are most often associated with landforms underlain by bedrock or glacial deposits overlying materials through which groundwater can move laterally, ultimately exiting as seepages and springs. This seepage water is usually clean and cold, coalescing into spring runs and headwaters streams that feed and help maintain high water quality in waterbodies downstream. Forested seeps can flow year-round. Many examples occur in draws, gorges, and along toe slopes associated with sandstone bedrock in the unglaciated Driftless Area, or, in glaciated areas, along the bases of bluffs where rivers and streams have cut through deep glacial deposits or underlying bedrock.

Canopy dominants are variable but most often hardwoods such as black ash, yellow birch, American elm, red maple, and red oak. Conifers such as northern white-cedar, white spruce, hemlock, or white pine may be present in northern Wisconsin; hemlock and white pine also occur in Driftless Area valleys with cold air drainage. Shrubs and small trees can include mountain maple, muscle-wood, speckled alder, elderberry, nannyberry, and cranberry viburnum. Understory species include skunk cabbage, water-pennywort, marsh blue violet, swamp saxifrage, golden saxifrage, golden ragwort, silvery spleenwort, jewelweeds, and several rare sedges. The non-native watercress has become the dominant plant in forested seeps in some parts of the state.

Forested seeps support high plant diversity and provide habitat for many birds, herps and numerous invertebrates, including species that might otherwise be absent from adjoining lands.

Ecological Landscape Opportunities

Ecological Landscape	Opportunity*
Northwest Lowlands	M
Western Coulee and Ridges	M
North Central Forest	I
Central Lake Michigan Coastal	P
Central Sand Hills	P
Central Sand Plains	P
Forest Transition	P
Northeast Sands	P
Northern Lake Michigan Coastal	P
Northwest Sands	P
Southeast Glacial Plains	P
Superior Coastal Plain	P

M = Major; major opportunity exists in this Landscape; many significant occurrences are recorded, or restorations likely to be successful.
I = Important; several occurrences important to maintaining the community in the state occur in this Landscape.
P = Present; community is present in the Landscape but better opportunity exists elsewhere.

Rare Species

Many Species of Greatest Conservation Need (SGCN) are associated with forested seeps based on the findings in Wisconsin's 2015 Wildlife Action Plan. To learn more, visit the Northern Forest communities page and click on "Forested Seep".

Threats

- Altered hydrology is a primary threat to forested seeps. Activities such as road and other right-of-way construction, development, removal of forest cover, grazing, dredging, and excessive groundwater withdrawals can disrupt hydrology.
- Forested seeps are very vulnerable to negative water quality impacts from erosion due to their frequent location on or at the bases of steep slopes. Soils are fine-textured, sometimes mucky, and susceptible to damage from heavy equipment and motorized vehicle use, which may result in compaction, rutting, channeling of water, erosion, and direct damage to vegetation.
- The introduction of pollutants into groundwater can lead to the loss of more sensitive organisms inhabiting this community.
- Invasive plants can outcompete native species and significantly reduce floristic diversity of forested seeps. Problematic invasive plants include reed canary grass, creeping Charlie, moneywort, glossy buckthorn, and non-native watercress, which has become the dominant plant in springs and seeps in some parts of the state.

Management Techniques

- Passive management
- Pesticide treatments

Management Considerations

- Protect site hydrology of seeps, especially the immediate proximity of the seepage area or springs.
- Attempt to map forested seeps prior to timber sale establishment.
- Operating distances in the vicinity of a forested seep should be determined by the property forester following a site visit, and in consultation with the Natural Heritage Conservation District Ecologist.
- Establish a no-harvest buffer strip around seeps or springs to protect the water discharge quality and quantity and the unique vegetation established around the spring/seep.
- Forested seeps and adjacent areas often do not freeze solid. Harvesting equipment generally should not cross a forested seep nor operate at a distance that would negatively impact the water quality of the seep.

- Control invasive species in and around forested seeps. Aquatic-approved pesticide use is permitted, but should be timed to minimize impacts on animal species that use forested seeps, especially amphibians.